

MARKED UP AMENDED CLAIMS 1, 2, 5, 6, 12, 13 AND 19

1. (ONCE AMENDED) A saddle element for a static mixer comprising:

a generally ring-shaped support structure having a central axis, concentric inner and outer, radially spaced, circumferentially extending surfaces, and first and second axially spaced, generally parallel edge surfaces, said inner surface defining a fluid flow path which extends along said axis,

said edge surfaces being located in respective generally parallel transverse planes which are essentially perpendicular relative to said axis; and

a plurality of mixer components located in said flow path, said components having a first end which is closer to the transverse plane of said first edge than to the transverse plane of the second edge and a second end which is closer to the transverse plane of said second edge than to the transverse plane of the first edge,

said mixer components being arranged in at least two separate intersecting oblique planes, each of which intersecting oblique planes is disposed at an angle relative to said axis, there being a plurality of said components in each said plane, which components of each plane are spaced apart to provide openings for fluid flow.

2. (ONCE AMENDED) A saddle element as set forth in claim 1, wherein said components comprise crossbars, [there being at least one crossbar in each of said intersecting oblique planes, said] and wherein the respective crossbars [being] of each plane are disposed in a generally parallel relationship relative to one another.

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5. (ONCE AMENDED) A saddle element [as set forth in claim 3] for a static mixer comprising:

a generally ring-shaped support structure having a central axis, concentric inner and outer, radially spaced, circumferentially extending surfaces, and first and second axially spaced, generally parallel edge surfaces, said inner surface defining a fluid flow path which extends along said axis,

said edge surfaces being located in respective generally parallel transverse planes which are essentially perpendicular relative to said axis; and

a plurality of mixer components located in said flow path, said components having a first end which is closer to the transverse plane of said first edge than to the transverse plane of the second edge and a second end which is closer to the transverse plane of said second edge than to the transverse plane of the first edge,

said mixer components being arranged in at least four separate oblique planes, each of which oblique planes is disposed at an angle relative to said axis, said oblique planes being arranged in two separate pairs of oblique planes, the oblique planes of each pair being disposed in generally parallel, laterally spaced relationship relative to one another, the oblique planes of each pair being disposed so as to intersect the oblique planes of the other pair along lines which are generally perpendicular to said axis,

wherein said components comprise crossbars arranged in an elongated, generally w-shaped array having a pair of spaced ends, said array being disposed to extend laterally across said flow path with each end thereof being attached to said inner surface.



6. (ONCE AMENDED) A saddle element as set forth in claim [4] 5, wherein at least two of said crossbars are arranged in each of said intersecting oblique planes, and wherein the crossbars of each oblique plane are disposed in generally parallel, laterally spaced relationship [an elongated, generally w-shaped array having a pair of spaced ends, said array being disposed to extend laterally across said flow path with each end thereof being attached to said inner surface].

12. (ONCE AMENDED) A static mixer structure comprising two [of the] saddle elements [of claim 1], each said saddle element comprising:

a generally ring-shaped support structure having a central axis, concentric inner and outer, radially spaced, circumferentially extending surfaces, and first and second axially spaced, generally parallel edge surfaces, said inner surface defining a fluid flow path which extends along said axis,

said edge surfaces being located in respective generally parallel transverse planes which are essentially perpendicular relative to said axis; and

a plurality of mixer components located in said flow path, said components having a first end which is closer to the transverse plane of said first edge than to the transverse plane of the second edge and a second end which is closer to the transverse plane of said second edge than to the transverse plane of the first edge,

said mixer components being arranged in at least two separate intersecting oblique planes, each of which intersecting oblique planes is disposed at an angle relative to said axis,

said saddle elements being arranged with the second edge surfaces thereof disposed in mated, contacting relationship.

13. (ONCE AMENDED) A static mixer structure comprising [a] first, [a] second, [a] third and [a] fourth [of the] saddle elements [of claim 1], each said saddle element comprising:
a generally ring-shaped support structure having a central axis, concentric inner and outer, radially spaced, circumferentially extending surfaces, and first and second axially spaced, generally parallel edge surfaces, said inner surface defining a fluid flow path which extends along said axis,

said edge surfaces being located in respective generally parallel transverse planes which are essentially perpendicular relative to said axis; and

a plurality of mixer components located in said flow path, said components having a first end which is closer to the transverse plane of said first edge than to the transverse plane of the second edge and a second end which is closer to the transverse plane of said second edge than to the transverse plane of the first edge,

said mixer components being arranged in at least two separate intersecting oblique planes, each of which intersecting oblique planes is disposed at an angle relative to said axis,

said saddle elements being arranged with the second edge surfaces of said first and second elements disposed in mated, contacting relationship, with the second edge surfaces of said third and fourth elements disposed in mated, contacting relationship, and with the first edge surfaces of said second and third elements disposed in mated, contacting relationship.

19. (ONCE AMENDED) A saddle element as set forth in claim 18, wherein said tabs are disposed in longitudinal alignment relative to the support structure at positions which are offset circumferentially essentially 90° relative to [intersecting] a plane which includes said axis and is parallel to a line [48] where said oblique planes intersect.